

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

1-8. (Canceled)

9. (Original) A method of manufacturing an optical component, the optical component comprising a substrate having an optical surface, and a mounting frame for mounting the substrate, the method comprising:

assembling the optical component by mounting the substrate on the mounting frame; measuring a shape of the optical surface of the substrate; and processing the optical surface of the substrate;

wherein the substrate is mounted on the mounting frame during the measuring of the shape of the optical surface and the processing of the optical surface.

10. (Original) The method according to claim 9, wherein the substrate remains permanently mounted on the mounting frame during the measuring of the shape of the optical surface and the processing of the optical surface.

11. (Original) The method according to claim 9, wherein the mounting frame comprises more than three contact portions for providing a mounting contact between the mounting frame and the substrate, the contact portions of the mounting frame being disposed at distances from each other.

12. (Original) The method according to claim 9, wherein the mounting frame of the optical component is designed to be mounted to at least one adjacent mounting frame in an optical system, the method further comprising mounting the mounting frame to the at least one adjacent mounting frame and measuring the shape of the optical surface of the substrate while the mounting frame is mounted to the at least one adjacent mounting frame.

13. (Original) The method according to claim 9, further comprising determining differences between the shape of the optical surface and a target shape thereof, wherein the processing of the optical surface is carried out in dependence of the determined differences.

14. (Original) The method according to claim 9, wherein the optical component is designed for being mounted in an optical system such that the substrate has a predetermined orientation with respect to a direction of gravity, and wherein the measuring of the shape of the optical surface of the substrate is performed while the substrate is disposed in an orientation with respect to the direction of gravity which is substantially the same as the predetermined orientation

15. (Original) The method according to claim 9, wherein the processing of the optical surface is carried out by at least one of magneto-rheological fluid processing, ion beam processing, fluid jet processing, chemical and/or mechanical polishing, etching, milling, grinding, and hot or cold coating processes.

16. (Original) The method according to claim 9, wherein the measuring of the shape of the optical surface is carried out by at least one of interferometric measurement, measurement involving tactic coordinates, and measurement involving pattern projection.

17-19. (Canceled)

20. (Original) A method of manufacturing an optical system having plural optical components, wherein at least one optical component of the plural optical components comprises a substrate having an optical surface, and a mounting frame for mounting the substrate, the method comprising:

assembling the at least one optical component by mounting the substrate on the mounting frame;

measuring a shape of the optical surface of the substrate; and

processing the optical surface of the substrate;

wherein the substrate is mounted on the mounting frame during the measuring of the shape of the optical surface and the processing of the optical surface;

the method further comprising assembling the plural optical components to form the optical system.

21-22. (Canceled)

23. (Currently Amended) A method of manufacturing an optical system having plural optical components, wherein at least one optical component of the plural optical components comprises optical component, the optical component comprising a substrate having an optical surface and a mounting frame for mounting the substrate, the substrate having an optical surface, and was manufactured according to a the method comprising:  
assembling the optical component by mounting the substrate on the mounting frame via plural attachment members, the attachment members being attachable to the substrate;  
measuring a shape of the optical surface of the substrate while the substrate is mounted on the mounting frame; and  
processing the optical surface of the substrate; substrate while the substrate is mounted on the mounting frame,  
~~wherein the substrate is mounted on the mounting frame during the measuring of the shape of the optical surface and the processing of the optical surface;~~  
~~the method of manufacturing an optical system comprising assembling the plural optical components to form the optical system.~~

24-25. (Canceled)

26. (New) The method of claim 9, wherein the mounting frame is configured to support the substrate in an optical system for which the optical component is designed.

27. (New) The method of claim 9, comprising mounting another substrate on the mounting frame, wherein:  
said measuring a shape of the optical surface of the substrate is carried out while the another substrate is mounted on the mounting frame; and

    said processing the optical surface of the substrate is carried out while the another substrate is mounted on the mounting frame.

28. (New) The method of claim 9, wherein the mounting frame comprises a ring shaped member.

29. (New) The method of claim 9, wherein the mounting frame comprises a continuous member that provides support for the substrate at multiple locations.

30. (New) The method of claim 23, wherein the mounting frame is configured to support the substrate in an optical system for which the optical component is designed.

31. (New) The method of claim 23, comprising mounting another substrate on the mounting frame, wherein:

    said measuring a shape of the optical surface of the substrate is carried out while the another substrate is mounted on the mounting frame; and

    said processing the optical surface of the substrate is carried out while the another substrate is mounted on the mounting frame.

32. (New) The method of claim 23, wherein the mounting frame comprises a ring shaped member.

33. (New) The method of claim 23, wherein the mounting frame comprises a continuous member that provides support for the substrate at multiple locations.

34. (New) A method of manufacturing an optical component, the optical component comprising a substrate and a mounting frame for mounting the substrate, the substrate having an optical surface, the method comprising:

    mounting the substrate on the mounting frame;

    measuring a property of the substrate while the substrate is mounted on the mounting frame; and

    processing the optical surface of the substrate while the substrate is mounted on the mounting frame.

35. (New) The method of claim 34, wherein said mounting the substrate on the mounting frame comprises mounting the substrate on the mounting frame via plural attachment members, the attachment members being attachable to the substrate.

36. (New) The method of claim 34, wherein the mounting frame is configured to support the substrate in an optical system for which the optical component is designed.

37. (New) The method of claim 34, comprising mounting another substrate on the mounting frame, wherein:

said measuring a property of the optical surface of the substrate is carried out while the another substrate is mounted on the mounting frame; and

    said processing the optical surface of the substrate is carried out while the another substrate is mounted on the mounting frame.

38. (New) The method of claim 34, wherein the mounting frame comprises a ring shaped member.

39. (New) The method of claim 34, wherein the mounting frame comprises a continuous member that provides support for the substrate at multiple locations.